

PCAF (D-20): sc-6301

BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino terminal tail domain of histone results in an allosteric change in the nucleosomal conformation and an increased accessibility to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Several mammalian proteins have been identified as nuclear histone acetylases, including GCN5, PCAF (for p300/CBP-associated factor), p300/CBP and the TFIID subunit TAF II p250. Mammalian HDAC1 (also designated HD1) and HDAC2 (also designated mammalian RPD3), both of which are related to the yeast transcriptional regulator Rpd3p, have been identified as histone deacetylases.

REFERENCES

1. Lee, D.Y., et al. 1993. A positive role for histone acetylation in transcription factor access to nucleosomal DNA. *Cell* 72: 73-82.
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3. Bauer, W.R., et al. 1994. Nucleosome structural changes due to acetylation. *J. Mol. Biol.* 236: 685-690.
4. Brownell, J.E., et al. 1996. Tetrahymena histone acetyltransferase A: a homolog to yeast Gcn5p linking histone acetylation to gene activation. *Cell* 84: 843-851.
5. Yang, X.J., et al. 1996. A p300/CBP-associated factor that competes with the adenoviral oncoprotein E1A. *Nature* 382: 319-324.
6. Taunton, J., et al. 1996. A mammalian histone deacetylase related to the yeast transcriptional regulator RPD3p. *Science* 272: 408-411.
7. Yang, W.M., et al. 1996. Transcriptional repression by YY1 is mediated by interaction with a mammalian homolog of the yeast global regulator RPD3. *Proc. Natl. Acad. Sci. USA* 93: 12845-12850.
8. Bartl, S., et al. 1997. Identification of mouse histone deacetylase 1 as a growth factor-inducible gene. *Mol. Cell. Biol.* 17: 5033-5043.

CHROMOSOMAL LOCATION

Genetic locus: PCAF (human) mapping to 3p24.

SOURCE

PCAF (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PCAF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6301 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PCAF (D-20) is recommended for detection of PCAF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GCN5.

PCAF (D-20) is also recommended for detection of PCAF in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PCAF siRNA (h): sc-36198, PCAF shRNA Plasmid (h): sc-36198-SH and PCAF shRNA (h) Lentiviral Particles: sc-36198-V.

Molecular Weight of PCAF: 89 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, K-562 whole cell lysate: sc-2203 or Y79 cell lysate: sc-2240.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Veyra, D., et al. 2002. Human ING1 proteins differentially regulate histone acetylation. *J. Biol. Chem.* 277: 29832-29839.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **PCAF (E-8): sc-13124**, our highly recommended monoclonal alternative to PCAF (D-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PCAF (E-8): sc-13124**.